

Abbreviations and Symbols

GDP	Gross Domestic Product
EIA	Energy Information Administration
BTU	British thermal units
UBHC	Unburned Hydrocarbon
ASTM	American Society for Testing and Materials
CI	Compression Ignition
NO _x	Nitrogen Oxides
N ₂ O	Nitrous Oxide,
NO ₃	Nitrogen Trioxide
N ₂ O ₅	Nitrogen Pentoxide
EURO	European Union Research Organization
VOC	Volatile Organic Compounds
EGR	Exhaust Gas Recirculation
WI	Water Injection
SCR	Selective catalytic reduction
NH ₃	Ammonia
SNCR	Selective non-catalytic reduction
HNO ₃	nitric acid
N ₂ O ₃	Dinitrogen trioxide
WGSR	water–gas shift reaction
HNO ₂	Nitrous acid
VCR	Variable Compression Ratio
RME	rapeseed oil methyl ester
CR	Compression Ratio
IP	Injection Pressure
HPL	high-pressure loop
LPL	Low-pressure loop
BTE	brake thermal efficiency
BSFC	brake specific fuel consumption
PFI.	port fuel injector
WCOB	waste cooking oil biodiesel
POME	Pongamia oil methyl ester

KOH	Potassium hydroxide
CH ₃ OH	Methanol
ML	Madhuca Longifolia
FAME	fatty acid methyl ester
MLME	Madhuca longifolia methyl ester
CRDI	Common Rail Direct Injection
RTD	resistance temperature detectors
EGA	Exhaust Gas Analyzer
NDIR	nondispersive infrared sensor
B0	(0% Biodiesel + 100% Diesel) fuel blend
B10	(10% Biodiesel + 90% Diesel) fuel blend
B20	(20% Biodiesel + 80% Diesel) fuel blend
B30	(30% Biodiesel + 70% Diesel) fuel blend
B90	(90% Biodiesel + 10% Diesel) fuel blend
B100	(100% Biodiesel + 0% Diesel) fuel blend
BP	Brake Power